

**Remarks**

**I. Status of Claims**

Claims 1-2, 5-8, and 10-14 are currently pending in the application. Claims 1, 7, and 11 are independent.

Claims 1-2, 5-8, and 10-11 stand rejected under 35 USC 103(a) as being allegedly unpatentable over Kawashima *et al.* (US 6,851,258) (hereinafter “Kawashima”) in view of Tashiro *et al.* (US 6,662,480) (hereinafter “Tashiro”), Schaller *et al.* (US 6,948,311) (hereinafter “Schaller”), and Boretto *et al.* (US 6,941,750) (hereinafter “Boretto”).

The Applicant respectfully requests reconsideration of these rejections in view of the following remarks.

**II. Pending Claims**

Independent claims 1, 7, and 11, the only independent claims, stand rejected under 35 USC 103(a) as being allegedly unpatentable over Kawashima in view of Tashiro, Schaller, and Boretto.

The Applicant respectfully submits that claims 1, 7, and 11 are patentable over the cited references at least because they recite, “...the intermittent fuel addition increases a catalyst temperature in order to burn up particulate matter that is deposited at an upstream end of a particulate filter.”

In the last paragraph on page 3, which also bridges page 4, of the Office Action, the Examiner recognizes that Kawashima does not disclose intermittent fuel addition to increase a catalyst temperature in order to burn up particulate matter that is deposited at an upstream end of a particulate filter as recited in Applicant’s claim 1.

Accordingly, in order to address this deficiency, the Office Action states on page 5 that, “[a]s shown in Figure 1, Boretto et al. disclose [sic] a method of determining an amount of particulate accumulated in a particulate filter (9). As illustrated in Figure 3b, Boretto et al. teach [sic] that during a regeneration step of the filter, the particulate matter in the channels at a periphery of the filter (i.e., further away from the center of the filter) is burned at a later time. Because of this, after a partial regeneration situation such as a suspension in Kawashima et al. or at the beginning of the third phase in Schaller et al., there is still particulate matter remaining in

the peripheral channels at an upstream location of the filter. Thus, based on the teaching by Boretto et al., **it would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have realized that Schaller et al. perform [sic] the intermittent fuel addition during the third phase in order to burn up particulate matter that is deposited at an upstream end of the filter.**" (emphasis added). See also the third paragraph of the "Response to Arguments" section that bridges pages 6 and 7 of the Office Action.

The Applicant respectfully disagrees. With respect to Shaller, in column 7, lines 23-25, it is recited that "[i]t is advantageous if, after shutting off the additional fuel metering, it is periodically switched on and off again. By doing this, a decrease in the temperature during regeneration may be prevented." (emphasis added).

Thus, in Shaller, it is respectfully submitted by the Applicant that Shaller does not disclose or suggest that a catalyst bed temperature in burn-up control is higher than the temperature of the catalyst before the burn-up control. Rather, in contrast to Shaller, certain embodiments of the present invention, for example, as shown in FIG. 3(a), include a catalyst bed temperature in burn-up control that is higher than 650°C and higher than a temperature of the catalyst bed before the burn-up control. Thus, the Applicant respectfully submits that certain embodiments of the present invention are more effective than Shaller and the other cited references in completely burning PM accumulated about each catalyst when the actual PM accumulation amount is reduced to zero. Lacking any teaching and/or suggestion of each and every limitation of the Applicant's claims, the Applicant respectfully submits that the alleged modification of Kawashima in view of Shaller fails to render the Applicant's claimed invention obvious.

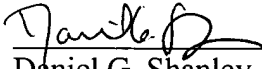
Therefore, the Applicant respectfully submits that, for at least these reasons, claims 1, 7, and 12, as well as their dependent claims, are patentable over the cited references.

### III. Conclusion

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance. The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: February 21, 2008

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